Nutrient Recommendations and Databases

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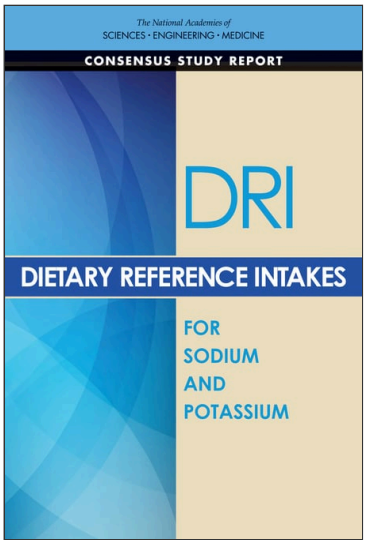
Nutrient Recommendations: Dietary Reference Intakes (DRI)



These documents are issued by the Food and Nutrition Board of the National Academies of Sciences Engineering, and Medicine. The Food and Nutrition Board addresses issues of safety, quality, and adequacy of the food supply; establishes principles and guidelines of adequate dietary intake; and renders authoritative judgments on the relationships among food intake, nutrition, and health.

DRI is the general term for a set of reference values used to plan and assess nutrient intakes of healthy people. These values, which vary by age and sex, include:

- Recommended Dietary Allowance (RDA): Average daily level of intake sufficient to meet the nutrient requirements of nearly all (97–98%) healthy individuals; often used to plan nutritionally adequate diets for individuals.
- Adequate Intake (AI): Intake at this level is assumed to ensure nutritional adequacy; established when evidence is insufficient to develop an RDA.

- Estimated Average Requirement (EAR): Average daily level of intake estimated to meet the requirements of 50% of healthy individuals; usually used to assess the nutrient intakes of groups of people and to plan nutritionally adequate diets for them; can also be used to assess the nutrient intakes of individuals.
- Tolerable Upper Intake Level (UL): Maximum daily intake unlikely to cause adverse health effects.

For the latest information about the DRIs, go to the Health.gov DRI Activities Update (https://health.gov/our-work/nutrition-physical-activity/dietary-guidelines/dietary-reference-intakes).

Reports

- Dietary Reference Intakes for Sodium and Potassium (https://www.nationalacademies.org/hmd/Reports/2019/dietary-reference-intakes-sodium-potassium.aspx)
- Dietary Reference Intakes for Calcium and Vitamin D (https://books.nap.edu/openbook.php?record_id=13050)
- Dietary Reference Intakes: Applications in Dietary Assessment (https://www.nap.edu/catalog.php?record_id=9956#toc)
- Dietary Reference Intakes for Calcium and Related Nutrients (https://books.nap.edu/openbook.php?record_id=5776)
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- Dietary Reference Intakes for Vitamins C, E, Selenium and Carotenoids (https://books.nap.edu/openbook.php?record_id=9810)
- Dietary Reference Intakes for Vitamins A, K and Trace Elements (https://books.nap.edu/openbook.php?record_id=10026)
- Dietary Reference Intakes for Macronutrients (e.g., protein, fat and carbohydrates) (https://books.nap.edu/openbook.php?record_id=10490)
- Dietary Reference Intakes for Water and Electrolytes (e.g. chloride) (https://books.nap.edu/openbook.php?record_id=10925)

DRI Tables

- Recommended Dietary Allowances and Adequate Intakes, Elements (https://www.ncbi.nlm.nih.gov/books/NBK545442/table/appJ_tab3/?report=objectonly)
- Recommended Dietary Allowances and Adequate Intakes, Vitamins (https://www.ncbi.nlm.nih.gov/books/NBK56068/table/summarytables.t2/?report=objectonly)
- Recommended Dietary Allowances and Adequate Intakes, Total Water and Macronutrients (https://www.ncbi.nlm.nih.gov/books/NBK56068/table/summarytables.t4/?report=objectonly)
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- Acceptable Macronutrient Distribution Ranges (https://www.ncbi.nlm.nih.gov/books/NBK56068/table/summarytables.t5/?report=objectonly)
- Tolerable Upper Intake Levels, Vitamins (https://www.ncbi.nlm.nih.gov/books/NBK56068/table/summarytables.t7/?report=objectonly)
- Tolerable Upper Intake Levels, Elements (https://www.ncbi.nlm.nih.gov/books/NBK545442/table/appJ_tab9/?report=objectonly)

Online DRI Tool

The DRI Calculator for Healthcare Professionals (https://www.nal.usda.gov/fnic/dri-calculator/) is an interactive tool to calculate daily nutrient recommendations for dietary planning based on the Dietary Reference Intakes (DRIs) established by the Food and Nutrition Board of the National Academies of Sciences, Engineering and Medicine. While this data represents current scientific knowledge on nutrient needs, individual requirements may be higher or lower than the DRI recommendations.

Daily Values

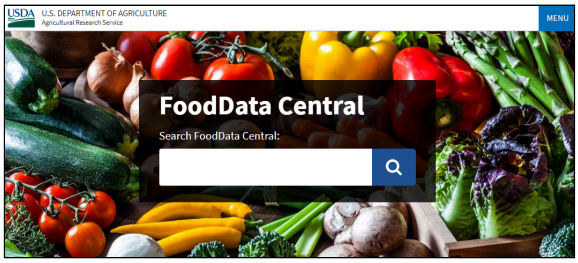
Recommended intakes of nutrients vary by age and sex and are known as Recommended Dietary Allowances (RDAs) and Adequate Intakes (AIs). However, one value for each nutrient, known as the Daily Value (DV), is selected for the labels of dietary supplements and foods. A DV is often, but not always, similar to one's RDA or AI for that nutrient. DVs were developed by the U.S. Food and Drug Administration (FDA) to help consumers determine the level of various nutrients in a standard serving of food in relation to their approximate requirement for it. The label actually provides the %DV so that you can see how much (what percentage) a serving of the product contributes to reaching the DV.

DV Tables

- For vitamins and minerals, all age categories (https://www.fda.gov/media/99069/download)
- For macronutrients (protein, carbohydrates, fats) and other food components (sodium, fiber, added sugars), all age categories (https://www.fda.gov/media/99059/download)

USDA FoodData Central

(https://fdc.nal.usda.gov/)



The U.S. Department of Agriculture FoodData Central (https://fdc.nal.usda.gov/) provides detailed information on the nutrient content of foods consumed in the U.S. including a subset of American Indian/Alaska Native Foods.

USDA Databases

Food and nutrient databases from the U.S. Department of Agriculture (https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/methods-and-application-of-food-composition-laboratory/mafcl-site-pages/database-resources/), including data sets for pro-anthocyanidins, flavonoids, choline, iodine, fluoride, isoflavones, and glucosinolates.

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